

The following listing of claims replaces all prior versions and listings of claims in this application.

Listing of Claims

1. (currently amended) An encoder having an input and an output, wherein the input receives a signal, wherein the encoder calculates an entropy value associated with at least a portion of the signal and encodes the signal to include data representative of the calculated entropy value, and wherein the output carries the encoded signal.
2. (original) The encoder of claim 1 wherein the signal is an audio signal.
3. (currently amended) The encoder of claim 1 wherein the encoder determines the entropy value based on a summation of probabilities.
4. (currently amended) The encoder of claim 1 wherein the data representative of the calculated entropy value is comprised of bits, and wherein each bit is coded by amplitude modulating the signal at a pair of frequencies to preserve an entropy of the encoded portion of the signal.
5. (currently amended) The encoder of claim 1 wherein the signal is encoded to preserve an entropy of the encoded portion of the signal.
6. (currently amended) The encoder of claim 1 wherein the data representative of the entropy value is comprised of bits, and wherein each bit is coded to preserve an entropy of the encoded portion of the signal.
7. (currently amended) The encoder of claim 1 wherein the data representative of the entropy value is comprised of bits, and wherein each bit is coded by swapping a spectral amplitude of at least two frequencies in the signal.
8. (currently amended) The encoder of claim 1 wherein the signal is encoded to include the entropy value using frequency hopping.

9. (currently amended) The encoder of claim 1 wherein the signal is encoded to include the entropy value using spectral modulation.

10. (currently amended) The encoder of claim 1 wherein the entropy value is calculated using histograms.

11. (currently amended) A decoder having an input and an output, wherein the input receives a signal, wherein the decoder decodes the signal to read an entropy code from the signal, and wherein the output carries a signal based upon the decoded entropy code.

12. (original) The decoder of claim 11 wherein the signal is an audio signal.

13. (currently amended) The encoder of claim 11 wherein the entropy code represents an entropy having a value determined based on a summation of probabilities.

14. (original) The decoder of claim 11 wherein the entropy code is decoded by amplitude demodulating pairs of frequencies.

15. (original) The decoder of claim 11 wherein the entropy code is decoded by determining swapping events, and wherein the swapping events correspond to swapping of a spectral amplitude of at least two frequencies in the signal.

16. (original) The decoder of claim 11 wherein the entropy code is decoded using frequency hopping.

17. (original) The decoder of claim 11 wherein the entropy code is decoded using spectral demodulation.

18. (currently amended) The decoder of claim 11 wherein the decoder is configured to determine an entropy of the signal and compare the determined entropy to an entropy represented by the entropy code.

19. (currently amended) The decoder of claim 18 wherein the decoder is configured to detect at least one of a compression operation and a decompression operation based on the comparison.

20. (currently amended) The decoder of claim 18 wherein the decoder is configured to prevent use of a device based based on the comparison.

21. (currently amended) The decoder of claim 18 wherein the decoder is configured to determine the entropy of the signal based on a sum of probabilities.

22. (currently amended) A method of encoding a signal comprising:
calculating an entropy value associated with at least a portion of the signal;

and

encoding the signal to include data representative of the calculated entropy

value.

23. (original) The method of claim 22 wherein the signal is an audio signal.

24. (currently amended) The method of claim 22 wherein calculating the entropy value includes calculating the entropy value based on a sum of probabilities.

25. (currently amended) The method of claim 22 wherein the data representative of the entropy value is comprised of bits, and wherein encoding the signal comprises the step of coding each of the bits by amplitude modulating the signal at a pair of frequencies to preserve an entropy of an encoded portion of the signal.

26. (currently amended) The method of claim 22 wherein encoding the signal comprises the step of coding the signal with the data representative of the calculated entropy value to preserve an entropy of an encoded portion of the signal.

27. (currently amended) The method of claim 22 wherein the data representative of the calculated entropy value is comprised of bits, and wherein encoding the signal comprises the step of coding each of the bits to preserve an entropy of an encoded portion of the signal.

28. (currently amended) The method of claim 22 wherein the data representative of the calculated entropy value is comprised of bits, and wherein encoding the signal comprises the step of coding each of the bits by swapping a spectral amplitude of at least two frequencies in the signal.

29. (currently amended) The method of claim 22 wherein encoding the signal comprises the step of coding the signal with the data representative of the calculated entropy value using frequency hopping.

30. (currently amended) The method of claim 22 wherein encoding the signal comprises the step of coding the signal with the data representative of the calculated entropy value using spectral modulation.

31. (currently amended) The method of claim 22 wherein encoding the signal comprises the step of coding the signal with data representative of the calculated entropy value using histograms.

32. (currently amended) A method of decoding a signal comprising:
decoding the signal to read a calculated entropy code from the signal; and
providing an output based upon the calculated entropy code.

33. (original) The method of claim 32 wherein the signal is an audio signal.

34. (currently amended) The method of claim 32 wherein the calculated entropy code is based on a sum of probabilities.

35. (currently amended) The method of claim 32 wherein decoding the signal comprises decoding the calculated entropy code by amplitude demodulating pairs of frequencies.

36. (currently amended) The method of claim 32 wherein decoding the signal comprises determining swapping events that correspond to swapping of a spectral amplitude of at least two frequencies in the signal.

37. (currently amended) The method of claim 32 wherein decoding the signal comprises using frequency hopping.

38. (currently amended) The method of claim 32 wherein decoding the signal comprises using spectral demodulation.

39. (currently amended) The method of claim 32 further comprising :
determining an entropy of the signal; and
comparing the entropy of the signal to the calculated entropy
code, wherein the output is based on the comparison of the entropy of the signal to the
calculated entropy code.

40. (currently amended) The method of claim 39 wherein the output prevents
playing of the signal.

41. (currently amended) The method of claim 39 wherein the entropy of the signal
is calculated based on a sum of probabilities.

42. (cancelled)

43. (cancelled)

44. (cancelled)

45. (cancelled)

46. (cancelled)

47. (cancelled)

48. (cancelled)

49. (cancelled)

50. (cancelled)

51. (cancelled)

52. (new) A machine readable medium having data stored thereon that, when
processed, cause a machine to:

extract data representative of a first entropy value associated a signal stored on
the machine readable medium;

calculate a second entropy value associated with the signal stored on the machine readable medium; and

prevent the rendering of signal information stored on the machine readable medium based on a comparison of the first and second entropy values.

53. (new) A machine readable medium as defined in claim 52, wherein the first and second entropy values are based on respective summations of probabilities.

54. (new) A machine readable medium as defined in claim 52, wherein the signal information stored on the machine readable medium includes at least one of audio and video information.
